



**SAHEL
A NEW APPROACH
TO GUARANTEE STRONG AND RESILIENT HEALTH
SYSTEMS**

Edition 2018





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SOME KEY CONCEPTS

Health System: According to the World Health Organization (WHO), a health system includes all organizations, institutions and the resources which aim is to improve health. National health systems may include the public sector, private sector, traditional healers' sector and an informal sector. Health systems mainly perform four essential functions: service delivery, creation of resources, or financing and administrative management.

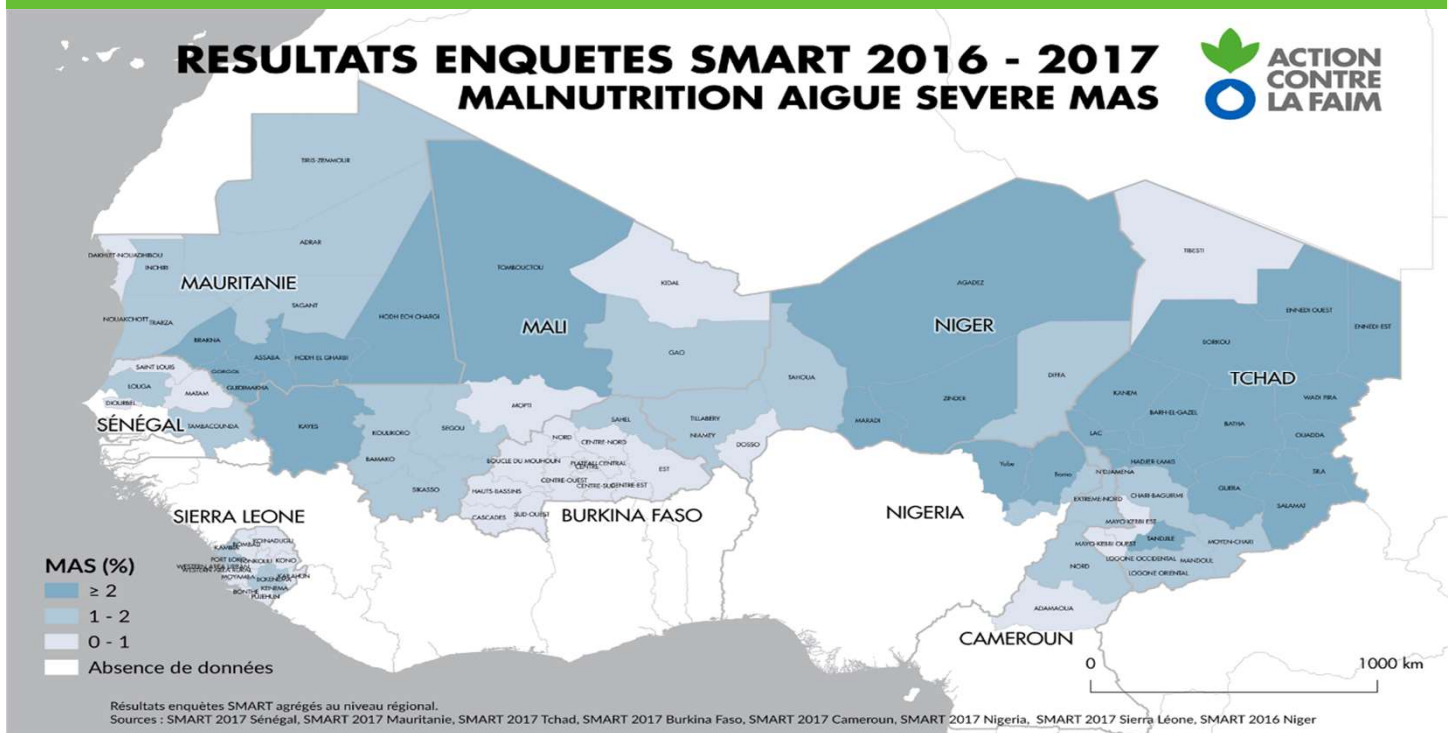
Health system strengthening: Strengthening a health system consists of acting on its six building blocks, in order to improve health services and the health of the populations in a fair and sustainable way. This action, allowing a paradigm change, must be guided with equity and a global vision so as to ensure success.

Health system resilience: Health system resilience refers to the capacity of the health system to anticipate, absorb, and adapt itself or to undergo a transformation when exposed to a shock (such as a pandemic, a natural disaster or armed conflicts), while maintaining its capacity to deliver services and to keep the same level of control over its structure and functions.

Type 1 Shock: Sudden increase in the number of patients; whatever the causes, the duration and the magnitude of this increase may be.

Type 2 Shock: Shocks directly affecting the intrinsic structure of the health system without a systematic increase of the number of patients. For example, a flood can alter the smooth function of health structures (no access to health structures, or to supply medicine), without affecting the population or the number of patients.

HEALTH AND NUTRITIONAL CONTEXT IN SAHEL



☞ **The Sahel is regularly affected by a cycle of mutually reinforcing factors of vulnerability and instability.** The last major drought in 2011/2012 left more than 18 million people facing hunger and one million children at risk of dying from malnutrition (Source: OCHA). Historical trends show that the region faces drought about every three years and a major drought every five to ten years (Source: WFP).

☞ According to the latest 2016-2017 Nutritional Surveys (SMART methodology), **the nutritional situation is critical in these countries, where the prevalence of severe acute malnutrition increased** in 2017 compared to previous years.

☞ **In recent years, a recurrence of epidemics has been noted in Sahel countries, strongly contributing to stress and weakening the already frail health systems :** Hepatitis E, Ebola, Rift Valley Fever, Lassa Fever, etc.

☞ **Low coverage and poor quality of health services, including nutrition, are linked to weak health systems. This does not make them resilient to natural disaster-type shocks.** In fact, faced with these different shocks, the health systems are already extremely weak and often under pressure during periods of health and / or nutritional peaks, are unable to provide quality care services.



HAVE WE IN THE SAHEL HEALTHY AND RESILIENT HEALTH SYSTEMS?

In 2013, ACF developed a methodology that aims to assess the strengths and weaknesses of the health system and the community structure (diagnosis), in order to determine priority actions required for their strengthening (programming).

Diagnostic studies have been carried out in several Sahelian countries (Burkina Faso, Mali, Mauritania, Niger, Senegal, Chad), which provided insights on challenges to be addressed for strengthening the health system and the communities of the study areas. However, there is still little information on coping strategies and health systems' capacities to respond to health and nutrition shocks in the region. It is therefore important to document these gaps in order to contribute to the strengthening of the resilience of the health systems in the region.

It is in this context that this study was conducted by Action Against Hunger through its West Africa regional office.



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It is a mixed study (qualitative and quantitative) of descriptive type.

The study's title is «Assessing Health Systems' Resilience to Health and Nutritional Emergencies in the Sahel Region, with Case Studies in Mali and Niger». It took place from March 2017 to March 2018, covering the Sahel region, and including case studies in Mali and Niger in three different contexts (Diffa-Tombouctou - Kita & Maradi).

The study started after approval of the ethics committee of the Ministry of Health in Niger, obtained on June 8, 2017, and the ethics committee of the National Institute of Public Health Research in Mali, obtained on 30 June 2017.

Four main data collection techniques were used, namely:

- (a) review of documents and epidemiological data,
- (b) individual interviews,
- (c) focus group discussions, and
- (d) workshops.

Quantitative epidemiological data were analyzed using Excel software. Monthly trends of shocks / peaks have been determined for the last five years (2012-2016) in the study area of each country. As for qualitative data, the analysis was mainly inductive and thematic.

Triangulation was used, data obtained from the desk review and quantitative analysis were compared to those gathered from individual interviews, focus groups and workshops to ensure coherence.



Key Findings

In total, thirteen (13) most common diseases were identified in Mali while twelve (12) were identified in Niger. **Those include malaria, acute malnutrition, acute respiratory infections, diarrhea, urinary tract infections, measles, HIV, dermatitis, meningitis, cholera, whooping cough, hepatitis E, acute otitis and stomach ulcer.**

In Diffa region, in Niger, hepatitis E, which was one of the common diseases, has emerged as a major public health problem since 2016 and 2017, following the internal movements of populations and massive influx of refugees coming from Nigeria.

- ❖ Factors influencing the occurrence of the most serious diseases (malaria, acute malnutrition, acute respiratory infections, diarrhea) were the most intense. This intensity was medium or low for other diseases (. Example: measles, meningitis, whooping cough,...)
- ❖ In the four study zones, factors influencing the occurrence of malaria included abundant rainfall, stagnant water accumulation, and mosquitos proliferation.
- ❖ Factors influencing the occurrence of malnutrition included lean seasons, the heavy workload of women in the field, poor sanitation and diseases. In addition, there were population movements due to the insecurity in the regions of Timbuktu in Mali and Diffa in Niger.





The health system suffers the combined effects of the peaks of the four main diseases during the period of March to September, that is to say, seven out of 12 months of the year.

Key Findings

- ❖ Cold wind and dusts in the winter and children insufficiently protected against them were main factors influencing the occurrence of **acute respiratory infections** in the four study areas.
- ❖ Multitude of flies, poor sanitation and hygiene conditions, stagnant water, and consumption of unsafe water and decayed fruits were factors influencing the occurrence of **diarrhea**.
- ❖ Regarding **measles**, factors of peak occurrence included strong heat accompanied by hot winds, population movements (Diffa, Maradi, Timbuktu), as well as low immunization coverage.
- ❖ Increased pluviometry, poor sanitation and consumption of unsafe water were identified as factors that influence the occurrence of **cholera** cases.

- ❖ In both study areas of Mali, overlaps in the peaks of malaria, acute malnutrition and diarrhea occurred from June to September (4 months) during the last five years. However, the health system also underwent pressure from acute respiratory infections during the months of March, April, May, and even often until July (5 months). Consequently, the health system experienced the combined effects of peaks of the four major diseases from March to September, that is, seven (7) out of 12 months of the year.
- ❖ In the case of Niger, peaks of malaria were not systematically followed by peaks of malnutrition in the study areas. The absence of overlap between these peaks in Maradi and Diffa regions can be explained by their extensive experience in management of acute malnutrition programs implemented by several partners since the first food and nutrition crises of 2002 in Maradi and 2012 in Diffa. Several humanitarian actors are conducting actions tackling malnutrition, this had probably contained the peaks of malnutrition. Since malaria did not benefit from similar actions, seasonal peaks remained constant.

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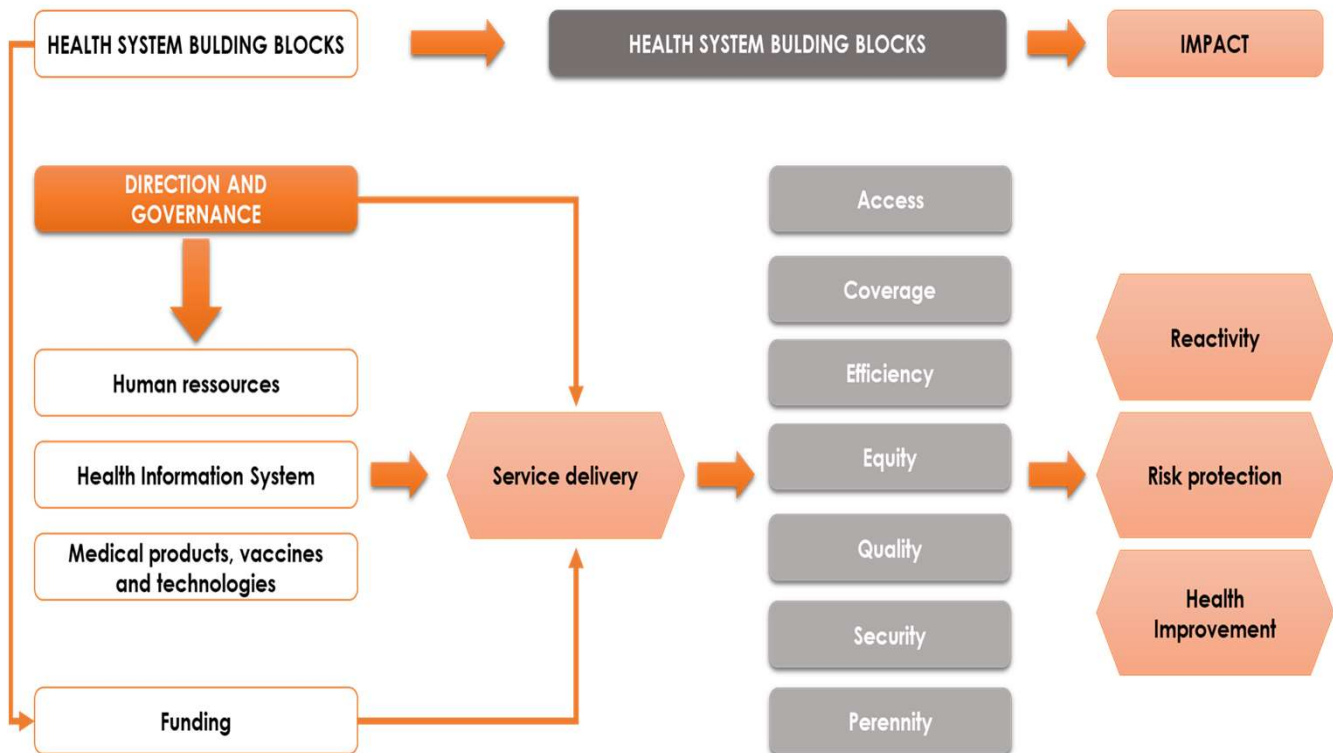




Each building block of the health system was affected by the combined effects of disease peaks

Key Findings

INTERACTIONS HEALTH SYSTEM BUILDING BLOCKS



Governance

During emergencies there was an important increase in the number of meetings and field visits made by government authorities and partners, as well as an accentuation of advocacy for resource mobilization, but similar actions were not taken before these periods. **The multiplicity of meetings between actors has made it difficult to coordinate the various coordination councils and to pool resources.** Additionally, there was a lack of state leadership to strengthen coordination.

Financing

Increased spending by governments, technical and financial partners, as well as donors and communities was observed during the periods of peaks. Nevertheless, this increase was not enough to meet the high demand. Delays experienced in the reimbursement of free medical care costs and low recovery costs from adult patients weakened the functioning of health centres/posts. The occurrence of shocks/emergencies **undermined the desired autonomy of these centres/posts by worsening their financial vulnerability, already precarious in normal times.** The important financial dependency of the health system of Sahel countries is a major challenge for its sustainability.



Human resources

The coverage was below the standards recommended by WHO for Medical Doctors, Nurses and Midwives in the four study areas. [This shortage was accentuated during periods of peak/emergency in stable areas \(Kita in Mali and Maradi in Niger\) as well as in the regions of Timbuktu in Mali and Diffa in Niger because of psychosis induced by insecurity.](#) Before the outbreak of hepatitis E in the Diffa region of Niger, there was no existing response plan or trained personnel. The key elements to address the outbreak were partners' support and the intervention of WHO resource persons to provide training of rapid response teams and community health workers on treatment and prevention strategies.

The insufficient number of health personnel negatively affected both delivery services during emergencies as well as staff motivation. Key points of staff dissatisfaction included insufficient monthly salary to cover their needs, lack of remoteness and insecurity bonuses, and heavy workload. [The majority of community health workers were inactive because of inadequate incentives and the precarious security situation. In these countries, health school curriculums did not include the management of acute malnutrition during initial training.](#)

Services delivery

[Insufficient health facilities and human resources negatively affected the availability and the quality of health care services.](#) Health centers' attendance and bed occupancy rates were high during peak periods, leading to the disorganization in the delivery of services for the emergency responses. For diseases such as acute respiratory infections, cholera and meningitis, the risk of contamination of health personnel was high during peak periods. In secure areas of Kita in Mali and Maradi in Niger, health workers and community health workers experienced difficulties in reaching remote populations because of insufficient vehicles (motorcycles) dedicated to outreach strategies. The ban on the use of motorcycles and curfews in insecure regions (Diffa in Niger) contributed to limit the access to health care. Supervisions of health centres were irregular or non-existent due to insecurity and insufficient human, financial and logistical resources.

Health information system

The analysis showed that in Mali, data was reported monthly in the region of Kita (secure zone), but only on a quarterly basis in the region of Timbuktu (emergency zone). In Niger, data was reported on a weekly basis through the specific tool of collection of data on reportable diseases. [Filling out the registers was an additional workload for health workers, especially when they needed to make a daily reporting during the peak periods.](#)

Infrastructure, equipment and supply

The health structures visited in secure areas (Kita in Mali and Maradi in Niger) were functional and built according to the standards of the Ministry of Health, while in the regions of Timbuktu in Mali and Diffa in Niger several health facilities were closed due to insecurity. Health centres in the four study areas experienced frequent shortages of medicine, food supplies and laboratory test reagents due to over-consumption during peak periods and epidemics, aggravated by movements of populations and refugees. During peak periods, drugs and nutritional supplies followed a parallel supply and delivery chain because of the high demand and the inability of the national system to meet these important needs.

[Technical partners and NGOs delivered the products directly to health centres, making it difficult to trace products.](#) Health districts and health centres/posts did not have adequate space for storing properly medicines and food supplies.

[Delays in delivery experienced by the national supply and delivery system contributed to the development of parallel channels for drug sales established by informal pharmacies and traditional healers.](#)



Atelier avec les partenaires au Mali Mars 2018: Direction régionale de la santé et chef de division nutrition





Key Findings

Strategies for emergency response or health system and community resilience



Font: Samuel Haue

▪ **Anticipatory capacity** refers to the ability of the health system to prevent the occurrence of a shock by anticipating it, as well the necessary means in case of shock.

▪ **Absorptive capacity** refers to the ability of the health system to continue to provide the same level of services to populations using the same levels of capacities, despite the occurrence of the shock

▪ **Transformation capacity** is the ability of health system actors to transform the structure and functioning of the system so that the occurrence of shocks no longer has any impact on this system

✓ None of the studied systems had the capacity to adapt, to absorb the shocks, or to transform themselves in order to no longer suffer the effects of the shock in a permanent manner.

▪ **Adaptive capacity** is the ability of health system actors to provide the same levels of care with few resources or different resources, which requires adjusting, modifying or changing organizational actions

✓ Adaptation was the most used strategy by the four study areas and other countries in the Sahel region. However, most adaptation interventions were initiated and implemented by NGOs, which was a limiting factor for sustainability.



Absorber



S'adapter



Transformer



Our causal model of health system stress in Sahel

Key Findings

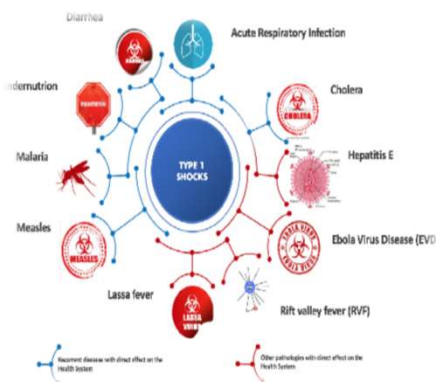
The synthesis of the information analyzed during this study allowed the development of a causal model of stress in the health system. This model links the factors of shock/peak occurrence, the interaction between shocks and their effects (stress) on the health system.

7/12

A health system under stress is a health system under pressure over a given period of time, due to the effects of type 1 or 2 shocks (or both), which can prevent the normal functioning of the health system to deliver services to populations.



The Health System under stress 7 months out of 12 of the year



CONCLUSIONS



- ❑ The factors causing the peaks of these pathologies are generally related to **the season (or climate change) and the population movements that are most often caused by situations of conflict and insecurity.**
- ❑ The peaks of severe and moderate acute **malnutrition overlap with those of other pathologies.**
- ❑ The health system experiences the joint effects of **peaks for 7 months per year.**
- ❑ Given the overlap of peaks, **each building block of the health system is affected by different shocks, putting significant pressure on the health system.**
- ❑ **There is no capacity for anticipation, absorption, or transformation** developed by health systems to cope with shocks.
- ❑ **Adaptation is the main resilience strategy implemented by health systems and communities to cope with peaks.**

OUR RECOMMENDATIONS FOR STRONG AND RESILIENT HEALTH SYSTEMS IN SAHEL

- ☰ In order to strengthen the resilience of the health system so as to anticipate, absorb peaks or transform itself in order to no longer suffer the effects of the shock permanently, **it is essential to act jointly on all six building blocks, while actively involving the community.**
- ☰ To be more effective and sustainable, **strengthening the resilience of the health system must be integrated with the implementation of programs to build the resilience of individuals, households and communities** through social protection programs. (social safety nets: Example: cash for health, Universal Health Coverage, cash transfers, etc.).
- ☰ **Interventions for management and prevention of the various pathologies identified (malaria, diarrhea, acute respiratory infections, malnutrition, etc.) must be joint.** To be more efficient, it is important to integrate the strategies of prevention and management of these different pathologies in order to pool resources and potentiate the results / effects.
- ☰ **It is essential to invest in active prevention through multi-sectoral approaches to these different pathologies** to prevent significant pressure on the already weak health system.
- ☰ **Response, and prevention strategies especially, should target the factors of occurrence of peaks**, and involve several sectors, including environmental protection, health, nutrition, agriculture, conflict resolution, social protection, education , gender...
- ☰ **Strengthening of coordination frameworks and mechanisms for prevention and response to health and nutrition emergencies** (Example: multisectoral and multi-stakeholder coordination at local and national level, etc.)
- ☰ Accompany countries with the development and implementation of **community health strategies focused on integrating health and nutrition**





WHICH APPROACH TO GUARANTEE A HEALTHY AND RESILIENT HEALTH SYSTEM FOR SAHEL COUNTRIES:

Based on the findings of this study, Action Against Hunger has developed a model for strengthening the resilience of health systems in Sahel, based on the causal model of health system stress.

◆ Actions must respond in a concrete way to improve the different components of the resilience of the health system and its community: anticipation capacity / absorptive capacity / adaptation capacity / transformation capacity.

◆ Active advocacy with a MEAL framework, technical support and research are the strategic lines to be implemented by Action Against Hunger, with state authorities and partners, to strengthen the resilience of health systems in Sahel.

◆ Actions should be undertaken in a multi-sectoral and multi-dimensional approach involving all key actors to produce the desired change, with emphasis on preventing and anticipating shocks both at the level of the different building blocks of the health system and in the community.

◆ Actions should pursue the goal of Universal Health Coverage. Objectives must be to increase services, increase the coverage and quality of existing health services, and improve the efficiency for achieving sustainability while integrating a gendered approach into the whole process of change.

OUR THEORY OF CHANGE



* The proposed activities can be increased and adapted to the needs and specificities of each context

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FOR FOOD.
AGAINST HUNGER
AND MALNUTRITION.

FOR CLEAN WATER.
AGAINST KILLER DISEASES.

FOR CHILDREN THAT GROW
UP STRONG.
AGAINST LIVES CUT SHORT.

FOR CROPS THIS YEAR,
AND NEXT.
AGAINST DROUGHT AND DISASTER.

FOR CHANGING MINDS.
AGAINST IGNORANCE AND
INDIFFERENCE.

FOR FREEDOM FROM HUNGER.
FOR EVERYONE. FOR GOOD

FOR ACTION.
AGAINST HUNGER.





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